HP V110 Wireless-N Router Series

Product overview

The HP V110 Wireless-N Router Series IEEE 802.11n wireless LAN (WLAN) routers are ideal first networking devices for building a small business data network with a secure connection to the Internet. This all-in-one solution combines 1) a router that connects a local network with the Internet, 2) a firewall to guard the network's Internet connection, 3) a four-port wired Fast Ethernet switch for local wired connections, and 4) an advanced IEEE 802.11n wireless access point for connecting wireless users who have backward compatibility with older 11b and 11g standards. You can use the routers in networks with up to 253 total wired and wireless users, including up to 32 wireless users. The series has three models. For environments with an Internet connection and a local cable modem, choose the HP V100 Cable/DSL Wireless-N Router. Also available are V110 routers that connect directly to ADSL Internet services: the ADSL-A router for DSL over POTS and the ADSL-B router for DSL over ISDN.

Key features

- Robust routing and security features
- WDS support for simplified network setup
- Advanced MIMO technology for enhanced range
- WPA/2, AES, TKIP, WEP security/encryption
- IEEE 802.1x/MAC address authentication/filtering

Features and benefits

Connectivity

- **Shared Internet access:**
  - **Wired and wireless user support:** enables up to 253 total (32 wireless) users to share a single cable/DSL or ADSL connection, making the most of your broadband service
  - **All-in-one device:** combines ADSL or cable modem, IEEE 802.11n access point, router, firewall, and 4-port switch in one box to allow easy and secure broadband access
- **High-speed wireless connectivity:**
  - **IEEE 802.11n 300 Mbps performance:** delivers connections significantly faster than IEEE 802.11g
  - **Backward compatible with IEEE 802.11b/g:** supports high speeds while protecting existing investments
  - **Multiple-Input Multiple-Output (MIMO):** advanced MIMO technology provides an enhanced wireless range and coverage area for improved roaming and ubiquity
  - **Packet bursting:** increases throughput by sending more frames in a given time period

Security

- **Wi-Fi Protected Access (WPA/WPA2) and Wired Equivalent Privacy (WEP):** supports advanced 128-bit WPA/WPA2 encryption and 40-/64- and 128-bit WEP encryption for legacy wireless clients
- **Multilevel wireless security:** provides additional wireless security with SSID Broadcast Disable and MAC filtering
- **Firewall:** full SPI firewall, access control rules, DoS protection, and other features help protect your network from the security risks of always-on broadband connections
- **Internet Protocol Security (IPSec):** enables secure site-to-site communication with up to five concurrent IPSec tunnels
- **Proxy Address Resolution Protocol (ARP):** allows secure setup of public servers behind router firewall

Quality of Service (QoS)

- **IP (RIP 1 and 2) and static routing:** allow the router to be used in multinetwork environments
- **WiFi Multimedia (WMM), QoS, and VLAN support:** improves the user experience for audio, video, and voice applications

- **Internet Group Management Protocol (IGMP) snooping and query:** allow more efficient use of resources when supporting multicast-based applications like online streaming video and gaming
- **Wireless Distribution System (WDS):** expands network coverage easily using compatible WDS-enabled APs
- **Dynamic Domain Name Service (DNS):** enables Internet connections with dynamic IP addresses to network applications such as Web or FTP servers that normally require static IP addresses (requires subscription with Dynamic DNS providers)

Ease of use

- **Setup wizards, preset defaults, and intuitive browser interface:** make setup and configuration easy
- **Easy one-button access to WPS and wireless connectivity enablement:** secures your wireless network with just one push of a button; reduces power consumption by turning off wireless connectivity when not needed

Warranty and support

- **3-year warranty:** with advance replacement and next-business-day delivery (available in most countries)
- **Electronic and telephone support:** limited electronic and telephone support is available from HP; refer to www.hp.com/networking/support for details on the support provided and the period during which support is available
- **Software releases:** refer to www.hp.com/networking/support for details on the software releases provided and the period during which software releases are available for your product(s)

HP V110 Wireless-N Router Series

Specifications

	HP V110 Cable/DSL Wireless-N Router (JE468A)	HP V110 ADSL-A Wireless-N Router (JE459A)	HP V110 ADSL-B Wireless-N Router (JE461A)
Ports	1 RJ-45 auto-sensing 10/100 WAN port (IEEE 802.3 Type 10Base-T, IEEE 802.3u Type 100Base-TX); Duplex: half or full 4 RJ-45 auto-sensing 10/100 LAN ports (IEEE 802.3 Type 10Base-T, IEEE 802.3u Type 100Base-TX); Duplex: half or full	1 RJ-11 ADSL2/2+ (ADSL Annex A, ADSL over POTS) port 4 RJ-45 auto-sensing 10/100 LAN ports (IEEE 802.3 Type 10Base-T, IEEE 802.3u Type 100Base-TX); Duplex: half or full	1 RJ-45 ADSL2/2+ (ADSL Annex B, ADSL over ISDN) port 4 RJ-45 auto-sensing 10/100 LAN ports (IEEE 802.3 Type 10Base-T, IEEE 802.3u Type 100Base-TX); Duplex: half or full
Physical characteristics			
Dimensions	6.3(d) x 7.0(w) x 1.6(h) in. (16 x 17.78 x 4.06 cm)	6.3(d) x 7.0(w) x 1.6(h) in. (16 x 17.78 x 4.06 cm)	6.3(d) x 7.0(w) x 1.6(h) in. (16 x 17.78 x 4.06 cm)
Weight	0.66 lb. (0.3 kg)	0.66 lb. (.3 kg)	0.66 lb. (.3 kg)
Memory and processor	Infineon 6996i chip, 32 MB RAM/ROM capacity, 2 MB flash	Infineon 6996i chip, 32 MB RAM/ROM capacity, 2 MB flash	Infineon 6996i chip, 32 MB RAM/ROM capacity, 2 MB flash
Mounting	Desktop	Desktop	Desktop
Performance			
Routing table size	10,000 entries	10,000 entries	10,000 entries
Environment			
Operating temperature	32°F to 104°F (0°C to 40°C)	39.2°F to 104°F (4°C to 40°C)	32°F to 104°F (0°C to 40°C)
Operating relative humidity	15% to 90%, non-condensing	15% to 90%, non-condensing	15% to 90%, non-condensing
Non-operating/Storage temperature	32°F to 140°F (0°C to 60°C)	32°F to 140°F (0°C to 60°C)	32°F to 140°F (0°C to 60°C)
Non-operating/Storage relative humidity	15% to 90%, non-condensing	15% to 90%, non-condensing	15% to 90%, non-condensing
Electrical characteristics			
Voltage	100-240 VAC	100-240 VAC	100-240 VAC
DC Voltage	12V	12V	12V
Current	1 A	1 A	1 A
Frequency	50 / 60 Hz	50 / 60 Hz	50 / 60 Hz
Number of internal antennas	1	1	1
Number of external antennas	2	2	2
Frequency band and Operating channels	2.400 - 2.462 GHz (11 channels)	2.400 - 2.462 GHz (11 channels)	2.400 - 2.462 GHz (11 channels)
Safety	UL 60950-1; IEC 60950-1; EN 60950-1; CAN/CSA-C22.2 No. 60950-1-03	UL 60950-1; IEC 60950-1; EN 60950-1; CAN/CSA-C22.2 No. 60950-1-03	UL 60950-1; IEC 60950-1; EN 60950-1; CAN/CSA-C22.2 No. 60950-1-03
Emissions	EN 55022 Class B; EN 55024; EN 301 489-1; EN 301 489-17; ICES-003; FCC Part 15, Subpart B; EN 300 328; RSS-Gen (Issue 2, 2007); RSS-210 (Issue 7, 2007); CFR 47; FCC part 15 subpart C	EN 55022 Class B; EN 55024; EN 301 489-1; EN 301 489-17; ICES-003; FCC Part 15, Subpart B; EN 300 328; RSS-Gen (Issue 2, 2007); RSS-210 (Issue 7, 2007); CFR 47; FCC part 15 subpart C	EN 55022 Class B; EN 55024; EN 301 489-1; EN 301 489-17; ICES-003; FCC Part 15, Subpart B; EN 300 328; RSS-Gen (Issue 2, 2007); RSS-210 (Issue 7, 2007); CFR 47; FCC part 15 subpart C
Management	Web browser; SNMP Manager; IEEE 802.3 Ethernet MIB	Web browser; SNMP Manager; IEEE 802.3 Ethernet MIB	Web browser; SNMP Manager; IEEE 802.3 Ethernet MIB
Features		ADSL Standards - ANSI T1.413 issue 2 - ITU G.992.1 (G.DMT) Annex A (ADSL over POTS) - ITU G.992.2 (G.lite) - ITU G.992.3 (ADSL2 DMT) - ITU G.992.4 (ADSL2 G.lite) - ITU G.992.5 (ADSL2+)	ADSL Standards - ANSI T1.413 issue 2 - ITU G.992.1 (G.DMT) Annex B (ADSL over ISDN) - ITU G.992.2 (G.lite) - ITU G.992.3 (ADSL2 DMT) - ITU G.992.4 (ADSL2 G.lite) - ITU G.992.5 (ADSL2+)
Notes	The HP V110 Cable/DSL Wireless-N Router (JE468A) was formerly sold as the 3Com Wireless 11n Cable/DSL Router (3CRWER300-73) and may ship with this product labeling. Height listed is with antenna folded and includes rubber feet; height with antenna unfolded is 3.9 in (10.0 cm); depth listed includes antenna.	The HP V110 ADSL-A Wireless-N Router (JE459A) was formerly sold as the 3Com ADSL 11n Firewall Router Annex A (3CRWDR300A-73) and may ship with this product labeling. Height listed is with antenna folded and includes rubber feet; height with antenna unfolded is 3.9 in (10.0 cm); depth listed includes antenna.	The HP V110 ADSL-B Wireless-N Router (JE461A) was formerly sold as the 3Com ADSL 11n Firewall Router Annex B (3CRWDR300B-73) and may ship with this product labeling. Height listed is with antenna folded and includes rubber feet; height with antenna unfolded is 3.9 in (10.0 cm); depth listed includes antenna.

Specifications (continued)

	HP V110 Cable/DSL Wireless-N Router (JE468A)	HP V110 ADSL-A Wireless-N Router (JE459A)	HP V110 ADSL-B Wireless-N Router (JE461A)
Services	3-year, 4-hour onsite, 13x5 coverage for hardware (UW082E) 3-year, 4-hour onsite, 24x7 coverage for hardware (UW085E) 3-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone support (UW088E) 3-year, 24x7 SW phone support, software updates (UW091E) 4-year, 4-hour onsite, 13x5 coverage for hardware (UW083E) 4-year, 4-hour onsite, 24x7 coverage for hardware (UW086E) 4-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (UW089E) 4-year, 24x7 SW phone support, software updates (UW092E) 5-year, 4-hour onsite, 13x5 coverage for hardware (UW084E) 5-year, 4-hour onsite, 24x7 coverage for hardware (UW087E) 5-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (UW090E) 5-year, 24x7 SW phone support, software updates (UW093E) 3 Yr 6 hr Call-to-Repair Onsite (UW094E) 4 Yr 6 hr Call-to-Repair Onsite (UW095E) 5 Yr 6 hr Call-to-Repair Onsite (UW096E) Refer to the HP website at www.procurve.com/services for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local HP sales office.	3-year, 4-hour onsite, 13x5 coverage for hardware (UW082E) 3-year, 4-hour onsite, 24x7 coverage for hardware (UW085E) 3-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone support (UW088E) 3-year, 24x7 SW phone support, software updates (UW091E) 4-year, 4-hour onsite, 13x5 coverage for hardware (UW083E) 4-year, 4-hour onsite, 24x7 coverage for hardware (UW086E) 4-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (UW089E) 4-year, 24x7 SW phone support, software updates (UW092E) 5-year, 4-hour onsite, 13x5 coverage for hardware (UW084E) 5-year, 4-hour onsite, 24x7 coverage for hardware (UW087E) 5-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (UW090E) 5-year, 24x7 SW phone support, software updates (UW093E) 3 Yr 6 hr Call-to-Repair Onsite (UW094E) 4 Yr 6 hr Call-to-Repair Onsite (UW095E) 5 Yr 6 hr Call-to-Repair Onsite (UW096E) Refer to the HP website at www.procurve.com/services for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local HP sales office.	3-year, 4-hour onsite, 13x5 coverage for hardware (UW082E) 3-year, 4-hour onsite, 24x7 coverage for hardware (UW085E) 3-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone support (UW088E) 3-year, 24x7 SW phone support, software updates (UW091E) 4-year, 4-hour onsite, 13x5 coverage for hardware (UW083E) 4-year, 4-hour onsite, 24x7 coverage for hardware (UW086E) 4-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (UW089E) 4-year, 24x7 SW phone support, software updates (UW092E) 5-year, 4-hour onsite, 13x5 coverage for hardware (UW084E) 5-year, 4-hour onsite, 24x7 coverage for hardware (UW087E) 5-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (UW090E) 5-year, 24x7 SW phone support, software updates (UW093E) 3 Yr 6 hr Call-to-Repair Onsite (UW094E) 4 Yr 6 hr Call-to-Repair Onsite (UW095E) 5 Yr 6 hr Call-to-Repair Onsite (UW096E) Refer to the HP website at www.procurve.com/services for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local HP sales office.

Radio characteristics:
IEEE 802.11b

Data rate	1 Mbps	11 Mbps
Receiver sensitivity	-91 dBm	-82 dBm
Transmit power	18 dBm	18 dBm

IEEE 802.11g

Data rate	6 Mbps	54 Mbps
Receiver sensitivity	-86 dBm	-68 dBm
Transmit power	18 dBm	14 dBm

IEEE 802.11n 2.4 GHz @ 20 MHz

Data rate	MCS0 Mbps	MCS7 Mbps	MCS8 Mbps	MCS15 Mbps
Receiver sensitivity	-80 dBm	-62 dBm	-83 dBm	-65 dBm
Transmit power	18 dBm	14 dBm	18 dBm	14 dBm

IEEE 802.11n 2.4 GHz @ 40 MHz

Data rate	MCS0 Mbps	MCS7 Mbps	MCS8 Mbps	MCS15 Mbps
Receiver sensitivity	-77 dBm	-59 dBm	-80 dBm	-62 dBm
Transmit power	18 dBm	14 dBm	18 dBm	14 dBm

Standards and protocols
(applies to all products in series)

General protocols
RFC 768 UDP
RFC 791 IP
RFC 793 TCP
RFC 1027 Proxy ARP
RFC 1531 Dynamic Host Configuration Protocol
RFC 1570 PPP LCP Extensions
RFC 1631 NAT

RFC 1661 The Point-to-Point Protocol (PPP)
RFC 1877 PPP Internet Protocol Control Protocol Extensions for Name Server Addresses
RFC 1994 PPP Challenge Handshake Authentication Protocol (CHAP)
RFC 2153 PPP Vendor Extensions
RFC 2516 A Method for Transmitting PPP Over

Ethernet (PPPoE)
RFC 2637 Point-to-Point Tunneling Protocol (PPTP)
RFC 2663 NAT Terminology and Considerations
RFC 1332 The PPP Internet Protocol Control Protocol (IPCP)
RFC 1334 PPP Authentication Protocols (PAP)

Specifications (continued)

	HP V110 Cable/DSL Wireless-N Router (JE468A)		HP V110 ADSL-A Wireless-N Router (JE459A)	HP V110 ADSL-B Wireless-N Router (JE461A)

HP V110 Cable/DSL Wireless-N Router (JE468A)

MCS Index	800 nS		400 nS	
	20 MHz Rate (Mbps)	40 MHz Rate (Mbps)	20 MHz Rate (Mbps)	40 MHz Rate (Mbps)
0	6.5	13.5	7.2	15
1	13	27	14.4	30
2	19.5	40.5	21.7	45
3	26	54	28.9	60
4	39	81	43.3	90
5	52	108	57.8	120
6	58.5	121.5	65	135
7	65	135	72.2	157.5
8	13	27	14.4	30
9	26	54	28.9	60
10	39	81	43.3	90
11	52	108	57.8	120
12	78	162	86.7	180
13	104	216	115.6	240
14	117	243	130	270
15	130	270	144.4	300

HP V110 ADSL-A Wireless-N Router (JE459A)

MCS Index	800 nS		400 nS	
	20 MHz Rate (Mbps)	40 MHz Rate (Mbps)	20 MHz Rate (Mbps)	40 MHz Rate (Mbps)
0	6.5	13.5	7.2	15
1	13	27	14.4	30
2	19.5	40.5	21.7	45
3	26	54	28.9	60
4	39	81	43.3	90
5	52	108	57.8	120
6	58.5	121.5	65	135
7	65	135	72.2	157.5
8	13	27	14.4	30
9	26	54	28.9	60
10	39	81	43.3	90
11	52	108	57.8	120
12	78	162	86.7	180
13	104	216	115.6	240
14	117	243	130	270
15	130	270	144.4	300

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Specifications (continued)

	HP V110 Cable/DSL Wireless-N Router (JE468A)	HP V110 ADSL-A Wireless-N Router (JE459A)	HP V110 ADSL-B Wireless-N Router (JE461A)

HP V110 ADSL-B Wireless-N Router (JE461A)

MCS Index	800 nS		400 nS	
	20 MHz Rate (Mbps)	40 MHz Rate (Mbps)	20 MHz Rate (Mbps)	40 MHz Rate (Mbps)
0	6.5	13.5	7.2	15
1	13	27	14.4	30
2	19.5	40.5	21.7	45
3	26	54	28.9	60
4	39	81	43.3	90
5	52	108	57.8	120
6	58.5	121.5	65	135
7	65	135	72.2	157.5
8	13	27	14.4	30
9	26	54	28.9	60
10	39	81	43.3	90
11	52	108	57.8	120
12	78	162	86.7	180
13	104	216	115.6	240
14	117	243	130	270
15	130	270	144.4	300

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